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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,021	03/24/2005	Franco Sartori	MI 6055 (US)	8813

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EXAMINER	
SYKES, ALTREV C	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
05/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,021	SARTORI ET AL.	
	Examiner	Art Unit	
	ALTREV C. SYKES	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *28 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *9-12 and 15-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 13-14, 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2005718*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-8, 13-14, and 19 filed on April 28, 2008 is acknowledged. Claims 9-12 and 15-18 of Groups II, III, IV are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected Groups II, III, and IV there being no allowable generic or linking claim.

2. The traversal is on the grounds that all of Applicant's currently pending claims recite the propylene polymer composition having an MFR value from 4 to 50 g/10 min, and being selected from propylene polymers i) and ii) and therefore recite a single inventive concept. While examiner does not argue that all of Applicant's claims recite a propylene polymer composition having an MFR value from 4 to 50 g/10 min, and being selected from propylene polymers i) and ii) said argument is not germane to the fact that "A group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature. The expression special technical features is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art." MPEP 1893.03(d) As such, and as evidenced by Branchesi et al. (US 5,529,845) and Kobylivker et al. (US 5,607,798) there is not a contribution over the prior art for the recited single inventive concept as acknowledged by Applicant. Additionally, the examiner notes that there is more involved in examining a patent application besides searching, such as formulating rejections and evaluating applicant's arguments.

3. The restriction requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8, 13, and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Branchesi et al. (US 5,529,845)

Regarding claims 1, 2, and 13 Branchesi et al. discloses polyolefin fibers suitable for the production of nonwoven fabrics by spun-bonding process, having improved strength and softness characteristics. (See Col 1, lines 5-8) Polyolefin fibers are disclosed which possess a high flexibility index and/or thermowelding strength, besides presenting good yellowing and aging resistance. (See Col 38-41) Is it noted by examiner that while Branchesi et al. discloses fibers and nonwoven fabrics produced by spun-bonding process, the reference additionally defines the thermowelding strength of the fiber. In order to evaluate the thermoweldability of staple fibers, one manufactures a nonwoven fabric with the test fiber by way of calendaring under set conditions. (See Col 5, lines 5-35) Branchesi et al. discloses a high flexibility index is important to ensure nonwoven fabrics with good softness characteristics and high thermowelding strength is important to ensure nonwoven fabrics with good strength characteristics. (See Col 4, lines 31-35) Further, Branchesi et al. discloses a fiber for nonwoven fabrics comprising a

polymer material additivated with organic phosphites and/or phosphonites, HALS (hindered amine light stabilizers) and optionally phenolic antioxidants. (See Col 1, lines 53-56) The said polymer material being selected from: 1) isotactic propylene homopolymers having an isotactic index greater than 90; 2) random copolymers of propylene with ethylene and/or a C_4 -C_8 α-olefin; and 3) blends of homopolymers 1) with copolymers 2), or blends of at least one of the above mentioned homopolymers and copolymers with heterophasic propylene polymers. (See Col 1, lines 56-66) Branchesi et al. discloses said heterophasic polymers comprising (by weight): A) from 10 to 60 parts of a propylene homopolymer, or a copolymer of propylene with ethylene and/or a C_4 -C_8 α-olefin, containing over 80% of propylene and having an isotactic index greater than 80 (Fraction A); B) from 1 to 25 parts of an essentially linear semicrystalline copolymer of ethylene with a C_3 -C_8 α-olefin, insoluble in xylene at ambient temperature (Fraction B); and C) from 15 to 87 parts of a copolymer fraction of ethylene with propylene and/or a C_4 -C_8 α-olefin, and optionally minor quantity of diene, said copolymer fraction containing from 10 to 80% of ethylene and being soluble in xylene at ambient temperature (Fraction C). Branchesi et al. also discloses that the fiber is obtained by a spinning process operating at a spinning temperature ranging from 260°C to 320°C, using polymers (1) or (2), or polymer blends (3), having MFR from 5 to 40 g/10 min. (Col 2, lines 1-22) Further, the random copolymers 2) contain a quantity of comonomer ranging from 0.05 to 20% by weight. When the quantity of comonomer exceeds 5%, said copolymers must be blended with the propylene homopolymer. (Col 2, lines 29-32) It is noted by examiner that Fraction A as disclosed by Branchesi et al. has an isotactic index

greater than 80 and when mixed with Fraction B essentially a linear semicrystalline copolymer in the presence of Fraction C, would provide for a crystalline propylene composition as evidenced by Applicant's disclosure that the crystalline polymers exhibit a stereoregularity of the isotactic type. (See pg. 3, line 17) Therefore, the fiber of Branchesi et al. is equated to that of Applicant.

Additionally, Branchesi et al. fails to teach a content of fraction soluble in xylene at room temperature lower than 10% by weight and a value of the ratio of the polymer fraction collected at the temperature range from 25° to 95° C by TREF with xylene to the xylene soluble fraction at room temperature higher than 8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the fraction soluble in xylene and the value of the ratio of the polymer fraction since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed value of the ratio of the polymer fraction is critical and has unexpected results. In the present invention, one would have been motivated to optimize the fraction soluble in xylene and the value of the ratio of the polymer fraction motivated by the desire to provide a fiber having both softness and strength properties. (See Col 1, lines 38-42) Additionally, Branchesi et al. discloses the solubility in xylene to be measured at ambient temperatures. (See Col 2, lines 5-15) A prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to

have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)

Finally, regarding claims 1, 2, 13 Branchesi et al. teaches the claimed invention above but fails to teach the composition having a melting temperature of 153°C or higher. It is reasonable to presume that melting temperature is inherent to the Branchesi et al. fiber. Support for said presumption is found in the use of like materials and/or like methods, as set forth above, which would result in the claimed property. In the instant case, Branchesi et al. discloses a similar composition to that claimed by applicant for component ii) and using like methods for the production of a nonwoven fiber and fabric. (See Col 1, lines 50-67) The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would inherently have been present once the Branchesi et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Regarding claims 3, 5-8, and 19 Branchesi et al. discloses that the fiber is obtained by a spinning process operating at a spinning temperature ranging from 260°C to 320°C, using polymers (1) or (2), or polymer blends (3), having MFR from 5 to 40 g/10 min. (Col 2, lines 1-22) Further, Branchesi et al. discloses a noncomposite, undrawn fiber for nonwoven fabric having thermowelding strength equal to or greater than 5 Newtons. (See Col 1, lines 50-53) Examiner equates 5N to be equal to 500cN (centinewton). Additionally, Branchesi et al. discloses fibers which are tested for their capability to be thermowelded. (See Col 5, lines 33-35) The clamping force of the welding plates was 800N; the clamping time was 1 second; and the temperature of the

plates was 150° C. (See Col 5, lines 57-60) Branchesi et al. also discloses the spinning process of the fibers be carried out at a temperature where both the extruder and the die during processing of the polymers ranges from 260°C to 320°C. (See Col 4, lines 35-37 and 62-63)

Regarding claim 4, Branchesi et al. fails to teach the difference in the ethylene content between polymer I) and polymer IIa) is at least 1 percentage unit with respect to the weight of the (co)polymer concerned. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the ethylene content since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed ethylene content is critical and has unexpected results. In the present invention, one would have been motivated to optimize the ethylene content motivated by the desire to provide a fiber having both softness and strength properties. (See Col 1, lines 38-42)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Branchesi et al. (US 5,529,845) in view of Kobylivker et al. (US 5,607,798)

Regarding claim 14 Branchesi et al. discloses polyolefin fibers suitable for the production of nonwoven fabrics by spun-bonding process, having improved strength and softness characteristics. (See Col 1, lines 5-8) Polyolefin fibers are disclosed which possess a high flexibility index and/or thermowelding strength, besides presenting good yellowing and aging resistance. (See Col 38-41) Is it noted by examiner that while Branchesi et al. discloses fibers and nonwoven fabrics produced by spun-bonding process, the reference additionally defines the thermowelding strength of the fiber. In order to evaluate the thermoweldability of staple fibers, one manufactures a nonwoven fabric with the test fiber by way of calendaring under set conditions. (See Col 5, lines 5-35) Branchesi et al. discloses a high flexibility index is important to ensure nonwoven fabrics with good softness characteristics and high thermowelding strength is important to ensure nonwoven fabrics with good strength characteristics. (See Col 4, lines 31-35) Further, Branchesi et al. discloses a fiber for nonwoven fabrics comprising a polymer material additivated with organic phosphites and/or phosphonites, HALS (hindered amine

light stabilizers) and optionally phenolic antioxidants. (See Col 1, lines 53-56) The said polymer material being selected from: 1) isotactic propylene homopolymers having an isotactic index greater than 90; 2) random copolymers of propylene with ethylene and/or a C_4 -C_8 α-olefin; and 3) blends of homopolymers 1) with copolymers 2), or blends of at least one of the above mentioned homopolymers and copolymers with heterophasic propylene polymers. (See Col 1, lines 56-66) Branchesi et al. discloses said heterophasic polymers comprising (by weight): A) from 10 to 60 parts of a propylene homopolymer, or a copolymer of propylene with ethylene and/or a C_4 -C_8 α-olefin, containing over 80% of propylene and having an isotactic index greater than 80 (Fraction A); B) from 1 to 25 parts of an essentially linear semicrystalline copolymer of ethylene with a C_3 -C_8 α-olefin, insoluble in xylene at ambient temperature (Fraction B); and C) from 15 to 87 parts of a copolymer fraction of ethylene with propylene and/or a C_4 -C_8 α-olefin, and optionally minor quantity of diene, said copolymer fraction containing from 10 to 80% of ethylene and being soluble in xylene at ambient temperature (Fraction C). Branchesi et al. also discloses that the fiber is obtained by a spinning process operating at a spinning temperature ranging from 260°C to 320°C, using polymers (1) or (2), or polymer blends (3), having MFR from 5 to 40 g/10 min. (Col 2, lines 1-22) Further, the random copolymers 2) contain a quantity of comonomer ranging from 0.05 to 20% by weight. When the quantity of comonomer exceeds 5%, said copolymers must be blended with the propylene homopolymer. (Col 2, lines 29-32) It is noted by examiner that Fraction A as disclosed by Branchesi et al. has an isotactic index greater than 80 and when mixed with Fraction B essentially a linear semicrystalline copolymer in the presence of Fraction C,

would provide for a crystalline propylene composition as evidenced by Applicant's disclosure that the crystalline polymers exhibit a stereoregularity of the isotactic type. (See pg. 3, line 17) Therefore, the fiber of Branchesi et al. is equated to that of Applicant.

Additionally, Branchesi et al. fails to teach a content of fraction soluble in xylene at room temperature lower than 10% by weight and a value of the ratio of the polymer fraction collected at the temperature range from 25° to 95° C by TREF with xylene to the xylene soluble fraction at room temperature higher than 8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the fraction soluble in xylene and the value of the ratio of the polymer fraction since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed value of the ratio of the polymer fraction is critical and has unexpected results. In the present invention, one would have been motivated to optimize the fraction soluble in xylene and the value of the ratio of the polymer fraction motivated by the desire to provide a fiber having both softness and strength properties. (See Col 1, lines 38-42)

Finally, regarding claim 14 Branchesi et al. teaches the claimed invention above but fails to teach the composition having a melting temperature of 153°C or higher. It is reasonable to presume that melting temperature is inherent to the Branchesi et al. fiber. Support for said presumption is found in the use of like materials and/or like methods, as

set forth above, which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would inherently have been present once the Branchesi et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Branchesi et al. discloses all of the claim limitations as set forth above, but the reference fails to teach a composite non-woven fabric comprising two or more layers wherein at least one layer is made of thermally bonded non-woven fabric as set forth above.

Kobylivker et al. discloses fibers and the nonwoven fabric or web which is formed from such fibers of a thermoplastic resin, and laminates using such a web as a component. (See Col 1, lines 13-16) Kobylivker et al. also discloses a very strong yet soft nonwoven polypropylene fiber and a fabric which is a web of the fibers which are produced from a blend of polyolefin polymers. (See Col 1, lines 40-44) One polymer is a highly crystalline polypropylene. The second polymer is a copolymer of polypropylene and polyethylene in which the ethylene has a random and block distribution, hence a "random block copolymer". Kobylivker et al. discloses the fibers and nonwoven fabric may be produced by the method of spunbonding. (See Col 4, lines 3-4) Polymers typically of use in the spunbond process generally have a processing temperature of between about 175°C to 320°C. (See Col 4, lines 36-39) Kobylivker et al. also discloses spunbond fibers are generally bonded together to consolidate them into a coherent layer. Thermal and ultrasonic bonding are the preferred means of bonding. (See Col 4, lines 50-55) Kobylivker et al. further discloses the fabric may be used in a single layer

embodiment or as a component of a multilayer laminate having a high basis weight. Such a laminate may include other spunbond layers, metlblown layers, films, glass fibers, staple fibers, paper, and other commonly used materials known to those one skilled in the art. (See Col 5, lines 1-7) Kobylivker et al. discloses a multilayer laminate may be formed by a number of different techniques including but not limited to using adhesive, needle punching, ultrasonic bonding, thermal calendaring, and any other method known in the art. (See Col 5, lines 20-25)

As Branchesi et al. discloses polyolefin (polypropylene and random copolymer) fibers suitable for the production of nonwoven fabrics by spun-bonding process and Kobylivker et al. discloses polypropylene and random block copolymer fibers and nonwoven fabric produced by the method of spunbonding, the art is analogous. It is noted that it would have been prima facie obvious within the purview of 35 U.S.C. § 103 to use a combination of the spunbond layers, with the expectation of obtaining a thicker nonwoven fabric having sufficient strength to be used as garments and personal care products. Further, although Branchesi et al. does not disclose a plurality of layers, the court has held that mere duplication of parts (i.e. layers) has no patentable significance unless a new and unexpected result is produced. See *In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)*

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is (571)270-3162. The examiner can normally be reached on Monday-Thursday, 8AM-5PM EST, alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1254. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACS/
5/20/08

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794